

NOT FOR CONSTRUCTION

FOR REVIEW AND APPROVAL

BY PUBLIC AGENCIES ONLY

PAVED ROAD

PAVFD ·

ROAD

PROPOSED PRIMARY

BOTTOM = 114.60

PRIVATE OPEN SPACE

LOT B & C

TC 10183

75 LF ELJEN MANTIS DW-100 GALLERIES

PROVIDE VENT

GENERAL SEPTIC NOTES

- 1. THE PROPOSED SEPTIC SYSTEM IS TO BE CONSTRUCTED TO CONFORM TO THE LATEST REVISION OF THE STATE OF CONNECTICUT PUBLIC HEALTH CODE.
- 2. IT IS THE RESPONSIBILITY OF THE INSTALLER TO CALL "CALL BEFORE YOU DIG," 1-800-922-4455, TWO FULL WORKING DAYS PRIOR TO ANY EXCAVATION WORK ON THE
- IT IS THE RESPONSIBILITY OF THE INSTALLER TO KEEP THE LOCAL HEALTH DEPARTMENT AND THE ENGINEER OF RECORD INFORMED OF CONSTRUCTION PROGRESS. NO DEVIATIONS FROM THE APPROVED DESIGN PLAN SHALL BE ALLOWED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER AND SANITARIAN. ENGINEER AND SANITARIAN WILL BE CONTACTED IF SOIL CONDITIONS OTHER THAN THOSE SHOWN ON PLAN ARE ENCOUNTERED AND WORK WILL BE HALTED PENDING REVIEW OF THOSE CONDITIONS.
- THE INSTALLATION OF THE SEPTIC SYSTEM SHALL BE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER.
- 5. ELEVATIONS SHOWN REFER TO THE INVERT (FLOW LINE) OF THE PROPOSED LEACHING SYSTEM UNLESS NOTED OTHERWISE.
- BASED ON AN OBSERVED PERCOLATION RATE OF 1" IN 20 MINUTES ABD A 6 BEDROOM DWELLING, A 1,500 GALLON SEPTIC TANK AND 1,012.5 SF OF EFFECTIVE LEACHING AREA MUST BE PROVIDED AS PER THE STATE OF CONNECTICUT HEALTH CODE. INSTALL 75' OF ELJEN MANTIS DOUBLE-WIDE 100 GALLERIES PROVIDING 1,500 SQ. FT. OF EFFECTIVE LEACHING AREA.
- UTILIZATION OF EXISTING SEPTIC TANK WILL BE BASED UPON THE INTEGRITY OF THE TANK AND BAFFLES DETERMINED PRIOR TO LEACHING SYSTEM CONSTRUCTION.
- PROVIDE A 1,500 GALLON, TWO COMPARTMENT SEPTIC TANK MADE OF CONCRETE WITH A MINIMUM 4,000 PSI CONCRETE PER ASTM STANDARDS. SEPTIC TANK ACCESS SHALL BE OUTFITTED WITH 24" DIAMETER RISERS TO FINISHED GRADE WHERE SOIL COVER OVER THE TANK EXCEEDS 12 INCHES. SEAL ALL JOINTS WATERTIGHT. ALL TANK INLET AND OUTLET PIPING SHALL BE SEALED WITH A POLYETHYLENE GASKET, "POLYLOK" OR EQUIVALENT. TANK
- SEPTIC TANK BAFFLES SHALL CONFORM TO TECHNICAL STANDARDS OF THE PUBLIC HEALTH CODE.
- 10. SEPTIC TANK SHALL HAVE AN APPROVED NON-BYPASS EFFLUENT FILTER AT THE OUTLET.
- 11. ALL PIPING BETWEEN HOUSE AND SEPTIC TANK SHALL BE FOUR INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/2" PER FOOT OR SIX INCHES IN DIAMETER WITH A MINIMUM SLOPE OF 1/2" PER FOOT. PIPE SHALL BE LAID WITH TIGHT JOINTS AND IN A STRAIGHT LINE WITH UNIFORM GRADES. ACCESSIBLE MANHOLES OR SURFACE CLEANOUTS SHALL BE PROVIDED AT ONE OR MORE CUMULATIVE CHANGES OF DIRECTION EXCEEDING 45 DEGREES OR WHERE BUILDING SEWER EXCEEDS 75 FEET IN LENGTH. MATERIALS TO BE ALLOWED BY TECHNICAL
- 12. ALL PIPE USED BETWEEN SEPTIC TANK AND LEACHING AREA SHALL BE 4" SDR-35 PVC PIPE WITH WATERTIGHT JOINTS OR EQUIVALENT ALLOWED BY TECHNICAL STANDARDS. PIPE SHALL BE SET ON A MINIMUM SLOPE OF 1/8" PER FOOT.
- 13. DISTRIBUTION BOXES ARE TO BE SET ON A STABLE FOOTING OF 12" MINIMUM DEPTH OF 1" CRUSHED STONE.
- 14. ALL FILTER FABRIC SHALL BE 1.5 OZ./YD. (ASTM D-5261), PERMEABILITY OF 1.0/SEC. (AS TM D-4491) AND A TRAPEZOID TEAR OF 15 LBS. (ASTM D-4533) OR EQUIVALENT.
- 15. NO FOOTING DRAINS OR OTHER GROUNDWATER DRAINS SHALL BE INSTALLED WITHIN 25' OF PROPOSED SEPTIC SYSTEM OR WITHIN 50 FEET OF SEPTIC SYSTEM IF DRAIN IS DOWN
- 16. PRIOR TO CONSTRUCTION ACTIVITIES THE LEACHING SYSTEM AREAS SHALL BE ROPED OFF OR OTHERWISE DELINEATED SO AS TO KEEP CONSTRUCTION TRAFFIC OFF THE SEPTIC
- STRIP AND STOCKPILE TOPSOIL AND REMOVE BOULDERS PRIOR TO PLACING FILL. ALL TOPSOIL MUST BE REMOVED IN FILL SYSTEMS.
- GRAVEL FILL TO BE DUMPED AT THE EDGE OF PREPARED LEACHING AREA AND PUSHED ONTO HARROWED SURFACE WITH TRACK MACHINE IN 12" (MAX) LIFTS. GRAVEL TO BE COMPACTED TO 90-95% STANDARDS PROCTOR DENSITY - ASTM D-698. THE ENGINEER OF RECORD AND THE HEALTH DEPARTMENT MUST APPROVE THE SELECT GRAVEL PRIOR TO ITS
- SELECT FILL SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL SHALL MEET THE FOLLOWING REQUIREMENTS:
 - A. THE SELECT FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN THE 3 INCH SIEVE.
 - UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE.
 - THE MATERIAL THAT PASSES THE #4 SIEVE IS TO BE REWEIGHED AND A SECOND SIEVE ANALYSIS COMPLETED.
 - THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA.

ΙН	E REMAINING SAME	PLE SHALL MEET THE FO	DLLOWING GRADATI	ON CRITI
ſ	SIEVE SIZE	EVE SIZE PERCENT PASSING		
	OILVL OIZL	WET SIEVE	DRY SIEVE	
	#4	100	100	
	#10	70-100	70-100	
	#40	10-50*	10-75	
ſ	#100	0-20	0-5	
Г				1

#200 0-5 0-2.5 *PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.

- 20. NON-SELECT FILL SHALL BE A CLEAN LOAM OR BETTER FREE OF ORGANIC MATTER.
- 21. THIS SYSTEM IS NOT DESIGNED FOR BACKWASH FROM A WATER SOFTENING SYSTEM OR THE OUTFLOW FROM A GARBAGE DISPOSAL OR TUB (BATHTUB, WHIRLPOOL, JACUZZI, ETC.) IN EXCESS OF 100 GALLONS.
- 22. MEASUREMENTS FOR AS-BUILT DRAWING TO BE COMPLETED BY PROFESSIONAL ENGINEER PRIOR TO BACKFILLING.
- 23. FINAL GRADING TO BE COMPLETED IMMEDIATELY AFTER INSPECTION AND COMPLETION OF MEASUREMENTS FOR AS-BUILT DRAWING.
- 24. THERE ARE NO WELLS WITHIN 75' OF PROPOSED SEPTIC SYSTEM.
- 25. THIS DESIGN CONFORMS TO APPLICABLE CODES AND ACCEPTED PRACTICE. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED.
- 26. LAND-TECH CONSULTANTS, INC., ASSUMES NO RESPONSIBILITY FOR SEPTIC SYSTEM SITE PREPARATION, LOCATION OR INVERT ELEVATIONS IN COMPLIANCE WITH THE APPROVED PLAN, UNLESS IT SUPERVISES EACH PHASE OF SYSTEM INSTALLATION.
- 27. BASED ON A VISUAL INSPECTION OF NEIGHBORING PROPERTIES AND A REVIEW OF AVAILABLE RECORDS, NO PART OF THE PROPOSED SEPTIC SYSTEM IS WITHIN THE REQUIRED SEPARATION DISTANCE FROM A WATER SUPPLY WELL, OR CLOSED LOOP GEOTHERMAL SYSTEM BOREHOLE/TRENCH AS DEFINED IN TABLE 1 OF THE "TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS", LATEST REVISION.

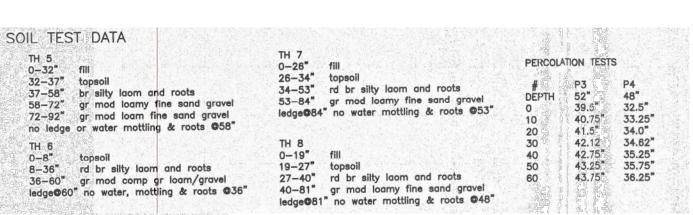
NEW ENGLAND WETLAND PLANTS, INC 820 WEST STREET, AMHERST, MA 01002 PHONE: 413-548-8000 FAX 413-549-4000

EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM New England Erosion Control/Restoration Mix for Dry Sites

Botanical Name	Common Name	Indicator
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Lolium multiflorum	Annual Ryegrass	
Lolium perenne	Perrenial Ryegrass	
Schizachyrium scoparium	Little Bluestem	FACU
Panicum virgatum	Switch Grass	FAC
Sorghastrum nutans	Indian Grass	UPL

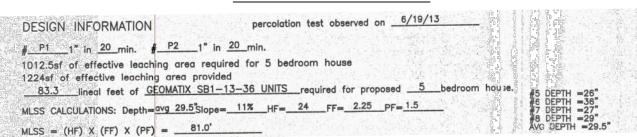
PRICE PER LB. \$18.00 MIN. QUANITY 5 LBS. TOTAL: \$90.00 APPLY: 35 LBS/ACRE:1250 sq ft/lb The New England Frosion Control/Restoration Mix For Dry Sites provides an appropriate selection of native and naturalized grasses to ensure that dry and recently disturbed sites will be quickly revegetated and the soil surface stabilized. It is an appropriate seed mix for road cuts, pipelines, steeper slopes, and areas requiring quick cover during the ecological restoration process. The mix may be applied by hydroseeding, by mechanical spreader, or on small sites it can be spread by hand. Lightly rake, or roll to ensure proper soil-seed contact. Best results are obtained with a Spring or late Summer seeding. Late Spring through Mid-Summer seeding will benefit from a light mulching of weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required. Fertilization is not required unless the soils are particularly infertile. Preparation of a clean weed free seed bed is necessary for optimal results.

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is \$/bulk pound, FOB warehouse, Plus SH and applicable taxes.



TEST DATA DRAINAGE SYSTEMS TOPSOIL ORG BR SANDY SUBSOIL LT BR SANDY GRAVELLY TILL NO LEDGE, WATER OR MOTTLING FOUND ORG BR SANDY SUBSOIL LT BR SANDY GRAVELLY TILL NO LEDGE, WATER OR MOTTLING FOUND

ORIGINAL APPROVAL



INSTALLED

DESIGN INFORMATION percolation test observed on 6/19/13 ## P1 1" in 20 min. # P2 1" in 20 min. goosf of effective leaching area required for 5 bedroom house 1200sf of effective leaching area provided 60 lineal feet of MANSIS DW-100 SYSTEM required for proposed 5 bedroom house. MLSS CALCULATIONS: Depth=avg 29.5 Slope= 11% HF= 24 FF= 1.25 PF= 2 MLSS = (HF) X (FF) X (RF) = 60.0" WC DEPTH =29.5"		
900sf of effective leaching area required for 5 bedroom house 1200sf of effective leaching area provided 60 lineal feet of MANSIS DW-100 SYSTEM required for proposed 5 bedroom house. MLSS CALCULATIONS: Depth=avg 29.5 Slope= 11% HF= 24 FF= 1:25 PF= 2 #6 DEPTH = 26 #7 DEPTH = 27 #8 DEPTH = 29 #	DESIGN INFORMATION percolation test observed on 6/19/13	
1200sf of effective leaching area provided 60 lineal feet of MANSIS DW—100 SYSTEM required for proposed 5 bedroom house. #5 DEPTH = 26" #6 DEPTH = 36" #6 DEPTH = 36" #7 DEPTH = 27"		,
MLSS_CALCULATIONS: Depth=avg 29.5 Slope= 11% HF = 24 FF = 1.25 PF = 2 DEPTH = 26 DEPTH = 27 DEPTH = 2	900st of effective leaching area required for 5 bedroom house	E B E E E E
MLSS CALCULATIONS: Depth=avg 29.5 Slope= 11% HF= 24 FF= 1.25 PF= 2 #6 DEPTH = 36 TO DEPTH = 27 PF = 1.25 PF= 27 PF = 2		72 ⁸ G d
TO BE THE TOTAL		#5 DEPTH =26" .
TO BE THE TOTAL	MLSS CALCULATIONS: Depth=avg 29.5 Slope= 11% HF= 24 FF= 1:25 PF= 2	#6 DEPTH =36 #7 DEPTH =27
	MLSS = (HF) X (FF) X (PF) = 60.0	#8 DEPTH =29" AVG DEPTH =29.5"

PROPOSED SEPTIC SYSTEM DESIGN CALCULATIONS

OF BEDROOMS = 6 PERCOLATION RATE = 1 INCH 10.1 - 20.00 MINUTES USED FOR DESIGN (PERCOLATION RATE OF 1" IN 20 MINUTES)

SQUARE FEET OF LEACHING AREA REQUIRED = 1012.50 SF 1,375 GAL. SEPTIC TANK REQUIRED

75 LF X 20.0 SF/LF = 1,500 SF OF LEACHING AREA PROVIDED

40 LF X 27.2 SF/LF = 1,088 SF OF LEACHING AREA PROVIDED

PROPOSED MLSS CALCULATION - PRIMARY

HYDRAULIC FACTOR (HF):

HYDRAULIC GRADIENT AT BOTH ENDS OF SYSTEM = (119.1 - 114.0) / 66 = 7.7%; (118.3 - 112.0) / 66 = 9.5% AVG. HYDRAULIC GRADIENT = (7.7 + 9.5) / 2 =8.6% HYDRAULIC GRADIENT = 8.1 - 10.0%

AVERAGE DEPTH OF TEST HOLES WITHIN THE SYSTEM = DTH-5 = 26", DTH-7= 27" (26 + 27) / 2 = 26.5"

DEPTH OF DOWNGRADIENT TEST HOLE = DTH-6 = 36", DTH-8 = 29" (36 + 29) / 2 = 32.5" AVERAGE DEPTH OF RESTRICTIVE LAYER = (26.5 + 32.5) / 2 = 29.5"

FLOW FACTOR (FF): NUMBER OF BEDROOMS = 6

FF = 2.25

PERCOLATION FACTOR (PF): PERCOLATION RATE = 1" IN 10.1 - 20.0 MINUTES

MLSS = HF X FF X PF MLSS = 26 X 2.25 X 1.25

MLSS = 73 FEET PRIMARY LEACHING SYSTEM SPREAD = 75 FEET

INVERT ELEVATIONS

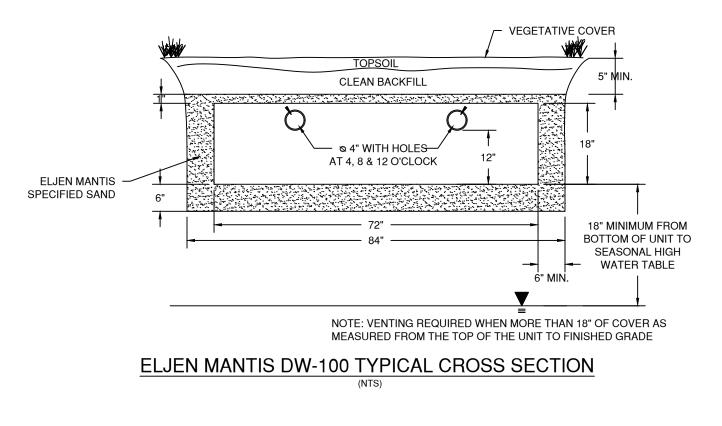
HOUSE SEWER AT FOUNDATION = 127.10 (NEW CONNECTION TO HOUSE PLUMBING)

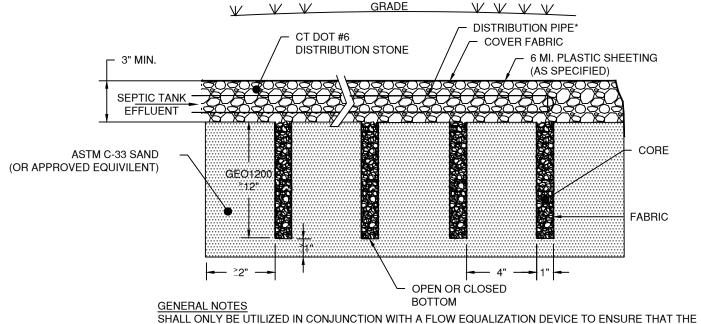
SEPTIC TANK (INSTALLED) INLET = 125.41 OUTLET = 125.20 DISTRIBUTION BOX

INLET = 115.80 LATERALS = 115.70 ELJEN MANTIS DW-100 INVERTS

40' SECTION = 114.60

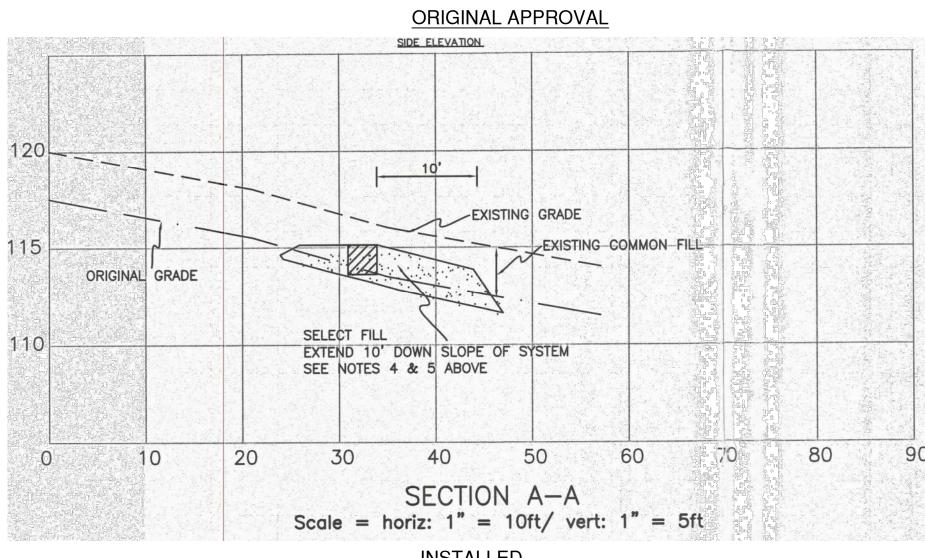
35' SECTION = 115.60 40' SECTION = 115.60 ELJEN MANTIS DW-100 BOTTOMS 35' SECTION = 114.60

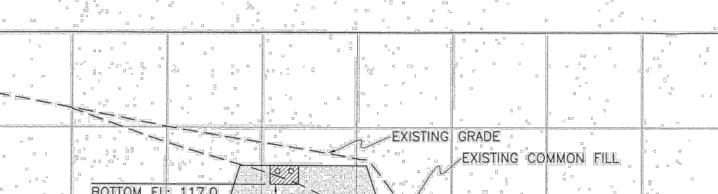


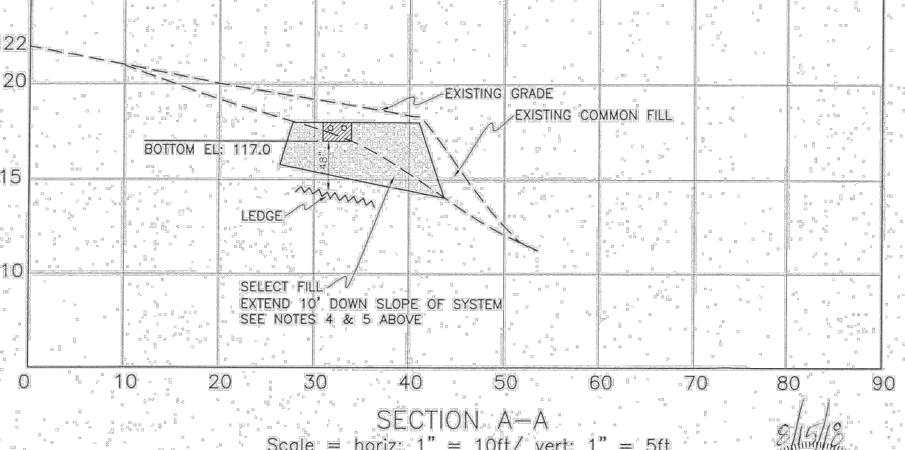


INTERIOR VOID STORAGE VOLUME IS NOT EXCEEDED DURING PEAK FLOW EVENTS. *3" MIN. I.D., ASTM D-3034, SDR 35 PIPE FOR GRAVITY APPLICATIONS. *0.75" MIN. I.D., ASTM D-2665, SCH 40 PVC PIPE FOR PRESSURE APPLICATIONS. FINISHED GRADE SHALL BE PITCHED TO SHEET FLOW STORMWATER AWAY FROM SYSTEM. COVER MATERIAL DEPTH SHALL BE GREATER THAN OR EQUAL TO 6" AND SHALL BE UNIFORM OVER

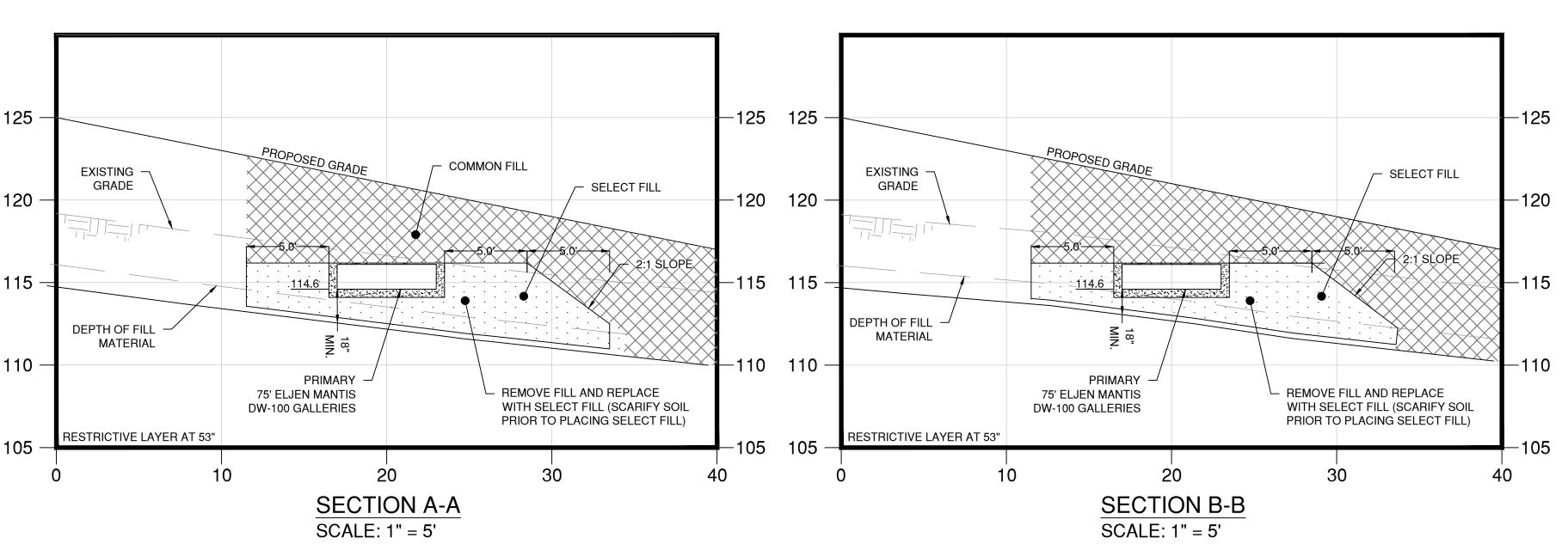
GEOMAT EDGE ST 1200 GALLERY TYPICAL CROSS SECTION







PROPOSED



EXCAVATION/FILL NOTES:

- 1. NO PROCESSING OF EARTH OF ANY KIND SHALL BE CONDUCTED ON THE SITE EXCEPT FOR MATERIAL THAT IS EXCAVATED DIRECTLY FROM THE PROJECT SITE FOR USE ON THE PROJECT SITE.
- 2. THERE SHALL BE NO SHARP DECLIVITIES, PITS OR DEPRESSIONS.
- 3. PROPER SURFACE DRAINAGE SHALL BE PROVIDED AND GROUNDWATER SHALL NOT BE POLLUTED. 4. AFTER EXCAVATION OR FILLING, THE PREMISES SHALL BE CLEARED OF DEBRIS AND TEMPORARY STRUCTURES WITHIN THE TIME PROVIDED IN THE PERMIT.

5. FILL MATERIAL SHALL NOT INCLUDE ORGANIC (FOR EXAMPLE TREE STUMPS, LEAVES, BRUSH OR

OTHER MATERIALS THAT DECOMPOSE, ETC.) OR PETROLEUM BASED PRODUCTS OR MATERIALS.

BASE LOT AREA (SQUARE FEET) X 50% OF THE ALLOWABLE TOTAL COVERAGE PERCENTAGE IN RESPECTIVE ZONE X 10' DIVIDED BY 27 CUBIC FEET =

48,679 SF X (0.5 X 25%) X 10 / 27 = 2,254 CY

PROPOSED FILL: 1,500 CY

PROPOSED CUT: 300 CY TOTAL EARTHWORK: 1,800 << 2,254 CY MAX FILL HEIGHT: 7'

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PROJECT No.

NTS

DRAWN BY

20030-01

2/5/2020

CHECKED BY